

## REMARKS

This paper is filed in response to the Office Action mailed on July 3, 2007. Presently, Claims 1-15 and 18-33 are pending in the application. Claims 1-15 and 18-33 have been examined and stand rejected.

Claims 1 and 30 have been amended. Claims 8, 18 and 22 have been canceled. Claims 38-42 are new. Reconsideration of Claims 1-7, 9-15, 19-21 and 23-33, and consideration of Claims 38-42 is respectfully requested.

### The Rejection of Claims 1-5, 7-15, and 18-33 Under 35 U.S.C. § 103(a)

Claims 1-5, 7-15, and 18-33 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,897,573 (Kelly) in view of U.S. Patent No. 3,036,923 (Mahon). Claims 1 and 30 have been amended. Claims 8, 18 and 22 have been canceled. Reconsideration of Claims 1-5, 7, 9-15, 19-21, and 23-33 is respectfully requested.

Claim 1 is related to a method of making a restructured seafood product. In summary, the method includes a first step for modifying the surfaces of more than one seafood portion, and a second step for preparing a surimi-based binder. A third step is related to coating the seafood portions with the binder. A fourth step relates to forming the seafood portions into a restructured product. A fifth step relates to elevating the temperature of the product to set the binder. Claim 30 is also related to a method of making a restructured seafood product. In Claim 30, however, the method does not include pretreating the seafood portions with phosphate or salt, since the phosphate or salt is provided in the surimi-based binder.

With respect to Claims 1 and 30, the Examiner is respectfully asked to consider the following remarks made in the application relating to these methods. The binding method of the invention provides greater cohesion between seafood portions using less surimi to unite the seafood portions into a cohesive product visually appearing very similar to a whole piece of

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seafood. To do this, the method modifies the surfaces of the seafood causing rearrangement of the proteins, thus, making open binding sites available for the surimi to attach to the sites. According to the method, the surface treatment is *a much milder treatment* than what is conventionally thought of as fully extracting salt-soluble proteins from fish. For example, it was found that treating the seafood portions at *a temperature below the freezing point of water and for a short duration* with phosphate and, optionally, salt would result in the creation of binding sites. The binding sites formed on the seafood portions are then used in combination with a surimi-based binder (which has also been modified) to bond the seafood portions together, thus, requiring much less surimi to form a cohesive product (see the application at page 5, lines 3-20). The limitations of time and temperature of the much milder treatment are now embodied in Claim 1. Furthermore, the claims have also been amended to recite the binder is made from surimi. Claim 1 has the advantage that *frozen pieces* of seafood can be bound together without having to thaw the seafood pieces, which would result in loss of time and lead to drip and loss of water from the seafood. (See the application at page 5, lines 30-31.)

In contrast to Claim 1, Kelly discloses a much harsher treatment. For example, for Salmon, Kelly discloses allowing about 20 to 60 minutes at *room temperature*, and for saithe, Kelly discloses treatment with salt for about three days at *room temperature* (Col. 3, lines 1-18). Accordingly, there is absolutely no reason to believe that Kelly discloses the same effect taking place at the surfaces of the seafood portions as in Claim 1. Furthermore, nowhere does Kelly disclose a surimi-based binder. At most, Kelly discloses a special binder made by finely comminuting raw bone-free fish muscle and adding to 1 part by weight of this 0.5 to 1.5 parts by weight of water, from 0.01 to 0.10 parts by weight of salt and from 0.03 to 0.08 parts by weight of a food grade phosphate (Col. 2, lines 32-38).

Even combining the disclosures of Mahon with those of Kelly does not lead one to reproduce the invention of Claim 1. Mahon is related to the preservation of fish, and more particularly, to inhibiting the loss of moisture, soluble protein, minerals, and vitamins of frozen fish on thawing and cooking (Col. 1, lines 9-12). Mahon discloses the treatment of fish fillets by dipping in solutions of potassium and sodium salts of phosphate. However, these are only *dipping solutions* which at most contain only 50% of phosphate salt (Col. 2, Table 1). Therefore, there is no reason to believe that such treatment with dilute solutions would have the same desired effect as applicants' invention. Furthermore, Mahon is only used for disclosing the use of phosphates on fish fillets, and does not change the basic and essential elements of Kelly, which are higher treatment times, higher treatment temperatures and the use of a non-surimi binder. Finally, Mahon, like Kelly, discloses the treatment of fish in a non-frozen condition by dipping in a solution, prior to freezing. (See Col. 1, lines 44-46 of Mahon.)

Claim 30 is an alternative to the method of Claim 1. Unlike Claim 1, the seafood portions are not pre-treated before combining with the surimi-based binder. This alternative method is described in the application on page 9, lines 9-14. Clearly, Kelly *does teach using an additional step* for specifically treating the fish fillets with salt, albeit at a much higher temperature and for greater time period, than is recited in Claim 1. Furthermore, it is recognized that omission of a step without loss of function is a basis for nonobviousness. (See the M.P.E.P. § 2144.04.II.B., page 2100-137, Rev. 5, Aug. 2006.) In this case, the method of Claim 30 is able to perform the function of modifying the surfaces of the seafood portions to cause binding, because the surface-modification of the seafood portions occurs upon mixing with the surimi-based binder that contains sufficient phosphate and/or salt.

With respect to Claims 32 and 33, the specific binding system is recited in these claims that is attributed to the surface modification of the seafood portions described above. Because

the method of Kelly has been shown to be substantially harsher than the claimed method, the binding system of Kelly is not the same, and therefore, Claims 32 and 33 should be allowable.

Accordingly, for all the reasons above, applicants submit that Claims 1-5, 7, 9-15, 19-21, and 23-33 are nonobvious in view of Kelly, alone or even in combination with Mahon. Therefore, the withdrawal of the rejection of Claims 1-5, 7, 9-15, 19-21, and 23-33 is respectfully requested.

#### The Rejection of Claim 6 Under 35 U.S.C. § 103(a)

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kelly in view of Mahon as applied above, and further in view of U.S. Patent No. 4,411,917 (Chang).

As discussed above, the method of Claim 1 is not obvious even considering the disclosures of Kelly and Mahon, either alone or in combination. Chang is cited for disclosing that tetrasodium pyrophosphate is well known in the art as a phosphate source for use in fish.

Accordingly, even considering the disclosure of Chang with those of Kelly and Mahon, Claim 1 is not rendered obvious. Claim 6 depends from Claim 1.

Accordingly, the withdrawal of the rejection of Claim 6 is respectfully requested.

#### New Claims 38-42

Claims 38-42 are new. Claims 38 and 39 are dependent on Claims 32 and 33, respectively. Claims 38 and 39 are included to specifically recite an advantageous feature. Namely, that frozen pieces of seafood can be bound into a restructured product. In contrast, Kelly discloses treating the seafood at room temperature, and only undertakes to freeze the seafood pieces after they have been treated with the binder. (See Col. 4, lines 43-45.)

Claims 40, 41, and 42 relate to methods wherein *frozen* seafood pieces are bound together into a product. In Claims 40, 41, and 42, the methods seek to bind frozen pieces of seafood in a frozen condition, unlike Kelly that freezes the seafood only after it has been treated with binder.

The methods of Claims 40, 41, and 42 are advantageous because time is not wasted in thawing, and thaw drip and loss of water from the seafood is avoided. As discussed above, neither Kelly nor Mahon disclose this advantage.

The Telephone Interview

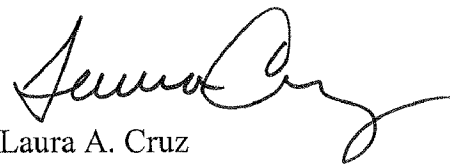
Applicants' attorney conducted a telephone interview with the Examiner on August 27, 2007. Applicants presented proposed claim amendments for consideration by the Examiner. The Examiner indicated that the rejection of the claims over the prior art of record would be maintained. The Examiner further stated that for Claim 1, steps a and b could be read to occur in a single step. The Examiner is thanked for providing help to applicants. However, no agreement was reached.

CONCLUSION

In view of the foregoing amendment and remarks, applicants submit that this application is in condition for allowance. If there are any further questions or comments, the Examiner is invited to contact the applicants' attorney at the number provided below.

Respectfully submitted,

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